

#### **CONSOL Energy Inc.**

CNX Center 1000 Consol Energy Drive Canonsburg, PA 15317-6506

phone:

724/485-4036 724/485-4837

e-mail:

stangeary@consolenergy.com

Web:

www.consolenergy.com

STAN GEARY Senior Counsel

October 9, 2013

Chief, Environmental Enforcement Section Environment and Natural Resources Division U.S. Department of Justice P.O. Box 7611 Washington, D.C. 20044-7611 Re: DOJ No. 90-5-1-1-09916/1

Director, Office of Civil Enforcement U.S. Environmental Protection Agency Ariel Rios Building, Room 3142 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

NPDES Enforcement Branch Chief U.S. EPA Region III 1650 Arch Street, 3WP42 Philadelphia, PA 19103

Chief Inspector, Environmental Enforcement West Virginia Department of Environmental Protection 601 57<sup>th</sup> Street, SE Charleston, WV 25304

Director, Division of Mining and Reclamation West Virginia Department of Environmental Protection 601 57<sup>th</sup> Street, SE Charleston, WV 25304

Chief, Office of Legal Services West Virginia Department of Environmental Protection 601 57<sup>th</sup> Street, SE Charleston, WV 25304

RE: Consent Decree: *United States, et al v. Consol Energy Inc. et al,* Civil Action No. 1:11-CV-28, U.S. District Court, Northern District of West Virginia

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### Ladies and Gentlemen:

Pursuant to Paragraphs 28, 45 and 46 of the above referenced Consent Decree, enclosed is the Defendants' Monongahela Basin Discharges Treatment System Evaluation Report.

Please contact me if you have any questions.

Sincerely,

Stan Geary
Stan Geary

cc:

W/Encl. via Email

Nina Rivera Chad Harsh Laura Thoms

## Monongahela Basin Discharges Treatment System Evaluation Report October 8, 2013

Pursuant to paragraph 28 of the Consent Decree in the matter of *United States, et al V. CONSOL Energy Inc. et al*, Civil Action No. 1:11-CV-28, U.S. District Court, Northern District West Virginia (DOJ No. 90-5-1-1-09916/1), the Defendants (collectively CONSOL) submit this Monongahela Basin Discharge Treatment System Evaluation Report ("Treatment System Evaluation Report").

According to Paragraph 28.a. of the Consent Decree, the Treatment System Evaluation Report shall include: (i) a summary of compliance with NPDES permits limits for the Monongahela Basin Discharges and any Outlet of any NPDES permit with discharge from the Treatment System; (ii) an evaluation of the Treatment Plant's effectiveness in removing chloride and dissolved solids; (iii) an evaluation of the Treatment Plant's impact on specific conductance; and (iv) any proposed changes to improve the performance of the Treatment System, along with a schedule for implementation of the changes. Each of the required components of the evaluation is addressed below.

### (i) Summary of Compliance with Monongahela Basin Discharges Effluent Limits:

Pursuant to Paragraphs 9.a, 9.c and 9.i of the Consent Decree, the Chloride Limits listed in Section 9.a became effective for the Monongahela Basin discharges on May 30, 2013. The Consent Decree Chloride Limits are 378 mg/L daily maximum and 218 mg/L monthly average. All discharges associated with Monongahela Basin Discharges were in compliance with the Consent Decree limits referenced above, with the exception of the discharges listed in table 1.

Mine Location	NPDES Permit	Outfall Number	Consent Decree Chloride Limits	Discharge Date	Chloride Concentration	
Blacksville No. 2	WV0064602	003	218 mg/L Monthly Average 378 mg/L Daily Max.	7/31/2013	296 mg/L	
Blacksville No. 2 WV0064602		003	218 mg/L Monthly Average 378 mg/L Daily Max.	8/21/2013	414 mg/L	

Table 1 – Non-compliance Summary:

These exceedances occurred due to some confusion on the part of CONSOL's environmental engineer and WVDEP's inspector supervisor as to the applicable limits for discharges from Outfall 003. They erroneously concluded that the NPDES permit interim chloride limits were in effect, which is not the case. The confusion has been addressed and no additional non-compliant discharges have occurred.

# (ii) Evaluation of the Treatment Plant's Effectiveness in Removing Chloride and Dissolved Solids:

Pursuant to Paragraph 27(b) of the Consent Decree, daily samples were collected for 30 days at five locations throughout the treatment process, as referenced in Paragraph 27(a) of the Consent Decree. Specific conductance, total dissolved solids (TDS), and chlorides were monitored throughout the thirty day sampling period. The plant feed water had an average chloride concentration of 1475 mg/L and an

average TDS concentration of 11750 mg/L. The plant product water had an average chloride concentration of 10.12 mg/L and an average TDS concentration of 29.13 mg/L. The treatment process effectively reduced average chloride and TDS concentrations by 99.3 and 99.4 percent, respectively. The treatment plant's effective removal of chloride and TDS is summarized in table 2.

Table 2 – Comparison of Chloride and TDS Concentrations in Plant Feed and Product Waters:

Sampling Location	Chloride Minimum Concentration	Chloride Maximum Concentration	Average Chloride Concentration	TDS Minimum Concentration*	TDS Maximum Concentration	Average Chloride Concentration
Plant Feed Water	1020 mg/L	2390 mg/L	1475 mg/L	9100 mg/L	17100 mg/L	11750 mg/L
Plant Product Water	4.79 mg/L	17.15 mg/L	10.12 mg/L	20 mg/L	86 mg/L	29.13 mg/L
Percent Reduction:	99.5 %	99.3 %	99.3 %	99.7 %	99.4 %	99.8 %

<sup>\*</sup> When the laboratory reported TDS was less than the detection limit of 20 mg/L, 20 mg/L was used in the calculation for TDS. Of the 30 product water samples collected, 15 samples had TDS results reported as less than 20 mg/L.

### (iii) Evaluation of the Treatment Plant's Impact on Specific Conductance:

Pursuant to Paragraph 27(b) of the Consent Decree, daily samples were collected for 90 days at five locations throughout the treatment process, as referenced in 27(a) of the Consent Decree. Specific conductance was monitored throughout the ninety day sampling period. The specific conductance measured in the plant feed water averaged 13697.16 umhos/cm. The specific conductance measured in the plant product water averaged 70.82 umhos/cm. The treatment plant has effectively reduced specific conductance by 99.5 percent. Table 3 summarizes the impact of the treatment plant's operation on specific conductance.

Table 3 – Comparison of Specific Conductance in Plant Feed and Product Waters:

Sampling Location	Specific Conductance Minimum Concentration	Specific Conductance Maximum Concentration	Specific Conductance Average Concentration	
Plant Feed Water	10084 umhos/cm	15920 umhos/cm	13697.16 umhos/cm 70.82 umhos/cm 99.5 %	
Plant Product Water	38.2 umhos/cm	96.04 umhos/cm		
Percent Reduction:	99.6 %	99.4 %		

# (iv) Proposed changes to improve the performance of the Treatment System, along with a schedule for implementation of the changes:

No changes are proposed.

Please see next page for Certification

#### Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John A. Owsiany

**Director Water Systems & Operations** 

October <u>8</u>, 2013